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FORTHCOMING MEETINGS

TUESDAY, 20TH MARCH, at 7.30 p.m. FILM EVENING. (Full details published in the last issue of the *Journal*.) *Thursday's Children*, *Heart of England*, *View of Middelharnis*, and *The Work of Master Stwocz*.

WEDNESDAY, 28TH MARCH, at 6.30 p.m. DISCUSSION on *'The Use of Leisure'*. Opening Speaker: Dr. Stanley Gooding, a Fellow of the Society. (Refreshments will be served from 5.45 p.m. See notice below.)

EVENING DISCUSSION MEETING

The third Evening Discussion Meeting will be held, on the same lines as the first two meetings, on Wednesday, 28th March, at 6.30 p.m. The subject will be *'The Use of Leisure'*, and the opening speaker will be Dr. Stanley Gooding, who has provided the following indication of the points on which he intends to elaborate:

One often hears it said, nowadays, that people are unable to entertain themselves since the advent of the easy means of entertainment of broadcasting and television. The inference is, that the use of their leisure has ceased to be of a constructive nature and we have become a nation of 'lookers-on' at the activities of others.

Whether or not this is true, and the various outlets that there are for the use of leisure, will be discussed.

Have people as much leisure as they used to have? This, and many other problems concerning our non-working hours will be examined.

The Chair will be taken by Mr. A. R. N. Roberts, a Member of Council of the Society.

Tickets of admission are not required and Fellows are entitled to introduce two guests. Light refreshments will be served in the Library from 5.45 p.m.

SOME SOCIAL EFFECTS OF TROPICAL MEDICINE WITHIN THE COMMONWEALTH

A paper by

R. S. F. HENNESSEY, C.M.G., M.D., F.R.C.P.I.,

*former Director of Medical Services, Uganda, read
to the Commonwealth Section of the Society on
Thursday, 8th December, 1955, with Sir Selwyn
Selwyn-Clarke, K.B.E., C.M.G., M.C., M.D.,
F.R.C.P., Chairman, Commonwealth Section
Committee, in the Chair*

THE CHAIRMAN: First of all, on behalf of the Commonwealth Section of this Society may I extend a very warm welcome to our Fellows and our guests here this evening. It is now my pleasant duty to introduce to you our lecturer, Dr. Hennessey.

Dr. Hennessey took degrees in arts, medicine, surgery and obstetrics at Trinity College, Dublin, in 1927. Two years later he earned further academic laurels by taking the Diploma in Tropical Medicine and Hygiene of England. Subsequently he qualified specially in bacteriology at the London University and took his M.D. Dublin. In 1935 he sat for the Membership of the Royal College of Physicians of Ireland and he was elected as Fellow of that very august body in 1950. So you see he has all the necessary qualifications for telling us about the social effects of tropical medicine.

Within a short time of qualifying, Dr. Robert Hennessey joined the Colonial Medical Service. His first post was that of pathologist in Uganda and whilst occupying that position he was for 15 years lecturer to Makerere College Medical School, where he helped to turn out the licentiates in medicine and surgery from that school each year. During the Second World War our lecturer was transferred on promotion to Palestine, where I believe he actually escaped the tragedy of King David Hotel in Jerusalem by a matter of minutes. After administrative experience in Palestine Dr. Hennessey spent a short time at the Colonial Office, Westminster, as an Assistant Medical Adviser to the Secretary of State for the Colonies. His special knowledge of the conditions in tropical Africa and in the Middle East must have been of great value in that responsible post. He then accepted further promotion as director of medical services in Uganda, which distinguished position he graced from 1949 to 1955, being rewarded for his outstanding services to tropical medicine and tropical pathology by having the honour bestowed on him of Companion of the Order of St. Michael and St. George.

Let it suffice for me to say, you will be fully convinced long before Dr. Hennessey has finished his paper that the social effects of western medicine on the people of tropical countries within the Commonwealth have been immense.

The following paper was then read:

THE PAPER

Early this year, during a debate in one of the East African Legislative Councils, an African member was discussing medical services. In the course of his speech,

he is reported to have said: 'Many people nowadays are attending hospitals. Even now I think that witch doctors attend hospitals'. The speaker clearly wished to emphasize something which he felt might not be sufficiently appreciated—the fact that the common folk in his territory, after some fifty years' experience of imported medical methods, have come to accept hospitals as a useful social service. We might also conclude that witch doctors still play a part in local affairs, but are not too proud to seek help from less orthodox practitioners when they themselves are afflicted by stubborn complaints. These remarks seem to me to sum up the change of attitude towards Western medicine which the last half-century has brought about in East Africa. Of course, contact with European ideas and methods has led to many other changes, varying considerably in their social significance and durability. In the case of medicine, it is hardly surprising that an African legislative councillor, born and bred in an environment where the witch doctor was a powerful component, should feel that our efforts over the last fifty years have been specially remarkable for their effect in reducing the ascendancy of an established system of magic.

While it is possible to trace a continuity of one kind or another in any sequence of biological events, the continuity of human experience sometimes seems less remarkable than the ability of man to adapt himself to the changes which take place around him. And when we come to consider the effects of bringing European culture, with its diverse and forceful activities, into close contact with communities whose ways of life for centuries have been relatively simple and uncritical, who had no written language, who had found no use for the wheel, the saw or the sail, we can readily see that adjustments of an exacting kind have been called for. The arrival of a small group of Europeans acted like a social enzyme among the tribes of East Africa, accelerating and facilitating reactions on an increasing scale. Attitudes and codes of values were modified in a short spell of years. Of course, the genetic material, the basis of inherited patterns of thought and behaviour, remained unaltered. But a great revolution had been started, which is having profound effects on African society. Physical conditions of life are undergoing marked changes, especially in the urban areas associated with industrial development. A new outlook on conduct and responsibilities is being formed. It is to be expected that people whose traditional ways are being rudely disturbed should sometimes feel anxieties about what is happening to them, like the chief who said, 'What Western civilization has done for us is to put a square bed into a round hut'. Similar doubts have been expressed by some of the representatives of European culture, who have from time to time uttered melancholy prophesies. Thus, in a 1912 medical report it was said, 'It should be remembered that the encouragement of the hitherto naked tribes to wear clothes as civilization advances is liable to cause the spread among them of diseases such as tick fever, from which they were formerly comparatively free'. Although the writer was perhaps more gloomy than his facts warranted, we too may sometimes entertain doubts regarding the blessings which our mode of life may confer upon people who have been used to a less complex existence. We should not overlook the fact that some 45 per cent of all hospital beds in Europe and North America

are occupied by psychiatric cases and that the so-called 'stress' diseases are a heavy affliction. These misfortunes, we must reflect, are part of the price which will doubtless have to be paid by those whom we are teaching to take their place in our modern world.

The social effects of the various stages of growth of medical theory and practice in the tropical areas of the Commonwealth present an immense field for study, and I shall have to restrict my remarks to places of which I have some personal knowledge. Also, the expression 'tropical medicine' needs some qualification. For within the time available this evening one could not hope to give more than the sketchiest account of the changes in social patterns and behaviour which have occurred in the tropical zone within the limits and lifetime of the Commonwealth and which were related to systems of therapy which had their periods of popularity. When one considers that the Ebers papyrus of about 1550 B.C. has sections dealing with such tropical ailments as crocodile bites, dysentery and guinea-worm; when one remembers that many diseases now generally regarded as tropical, such as plague and cholera, were once widely prevalent in temperate regions; and again, when one recognizes that there is no hard and fast division of diseases in relation to their occurrence within or outside the tropical belt, it becomes plain that the expression 'tropical medicine' has an elastic range of meaning. I propose, therefore, to restrict myself to mentioning some of the ways in which some isolated societies in the tropics have been affected by medical principles and practices which have been evolved since the middle of the nineteenth century and which have a special applicability in tropical regions. By this, we shall be giving due weight to the advances of the last hundred years in our understanding of the causes and transmission of the major tropical disorders and in the production of effective means of prevention and treatment. We still have far to go, particularly in assessing the relative importance of various endemic diseases as causes of incapacity, and in developing methods of control which can be applied on an adequate scale in territories of limited resources. And we must not forget that good health is primarily dependent upon good nutrition, a matter which involves much more than knowing what is an adequate dietary. But, leaving nutrition aside as a major subject in its own right, we can nowadays claim with some justification to be able to restrain the great killing diseases which were causing large epidemics not so long ago. Indeed, given unlimited funds, it would probably be within our power to reduce to negligible dimensions such mass endemic diseases as malaria, hookworm, yaws, leprosy, and the like; it is a question of providing an adequate supply of trained workers and the necessary materials, assuming that the communities at risk have reached the stage of understanding and willingness to co-operate. But this is a matter for the future. I want now to look at certain effects of our work in Africa. My examples will mainly be taken from experience in Uganda; but it is well known that similar results have occurred in other territories where these policies have been put into force.

In Uganda, as has happened elsewhere, one of the most notable changes in the popular attitude towards Western medicine arose from measures taken to

control a disease which was not primarily tropical in any sense, but which had a high incidence and was the cause of widespread morbidity. This disease was syphilis. It was from the rapid growth of confidence in the efficacy of arsenical preparations for the treatment of syphilis, which occurred shortly after the First World War, that an atmosphere was created which favoured the use of therapeutic methods far removed from those of the witch-doctor. In a comparatively short spell of years, illiterate and unsophisticated people were converted to a firm and naïve belief in the powers, not only of the white man's medicine, but of the injection technique itself, as a panacea for all ills. From those days, medical workers could generally depend upon a willing acceptance of advice and an embarrassingly increasing volume of men and women seeking cures by the only means which they had come to regard as genuinely effective—the needle. It must be remembered that, apart from quinine in malaria, antimonial compounds in schistosomiasis, and arsenicals in trypanosomiasis, the arsenobenzenes were at that time the only drugs which had a powerful curative effect in doses which were relatively non-toxic to the infected individual. Quinine was, of course, accepted as a valuable antimalarial drug; but malaria was such a common and familiar hazard that the oral administration of an effective remedy does not seem to have aroused special enthusiasm among people who had been used to the infection from childhood. The dramatic way in which syphilitic lesions affecting the reproductive organs responded to arsenical injections quickly hit the popular imagination. Also, the birth of healthy babies to women who had had a series of miscarriages, or who had produced a series of congenitally syphilitic infants, was an example of therapeutic success which could not be overlooked. Thus it was that the advent of a potent drug for a widely feared disease, together with the establishment of a system of dispensaries at which sufferers could get the specific treatment, greatly accelerated the evolution of a new social attitude, in which trust and optimism replaced suspicion and anxiety. It was this change of attitude which made it possible within a short span of years to extend to unsophisticated people a range of medical services, both curative and preventive, capable of influencing their health to a marked extent. The prestige of the indigenous witch doctor began to wane, at least as far as the treatment of diseases with conspicuous external manifestations was concerned; the exogenous practitioner received increasing respect. The numbers of new patients seen at Government medical units in Uganda rose steeply, as the following figures show:

<i>Year</i>	<i>New patients, all categories</i>		
1912	87,793
1922	97,308
1932	684,835
1942	748,221
1952	2,321,752 (out-patients only)

The introduction of sulphonamides, penicillin and other powerful remedies has of course reinforced the popularity of European medicine. Indeed, it must be admitted that these advances have brought social problems as well as benefits;

for it was soon realized that drugs stolen from Government medical units could be sold at attractive prices to unqualified persons who were prepared to take advantage of a gullible public. Activities of this kind have been on a considerable scale. But the general effect of specific therapy was good, in that people soon became much more willing to accept advice on the treatment and prevention of disease.

I shall now say something about trypanosomiasis, a group of diseases ranking high among those which influence the welfare of many African communities. Since the discovery in the early years of the century that trypanosome infection was transmitted by the tsetse fly, the need to break contact between man and the fly has led to the enactment of administrative controls which were new to the people whom they were designed to protect. The gravity of the situation in countries such as Uganda, coupled with early public recognition of the effectiveness of the measures taken to check an epidemic which is estimated to have cost some 200,000 lives between the years 1900 and 1907, evoked a general spirit of co-operation. Among these control measures, the most radical was the wholesale evacuation of the population from a zone about two miles wide along many hundreds of miles of the northern shore of Lake Victoria, together with the inhabitants of numerous islands. As a result of this policy, the association between man and the lacustrine tsetse, *Glossina palpalis*, was quickly reduced. Human trypanosomiasis rapidly decreased in incidence, the estimated number of deaths falling in Buganda Province from about eight thousand in 1905 to eighty-two in 1912, and to three in 1915. But this compulsory evacuation of about 100,000 people from the lake shore and islands was a less far-reaching event than the change in social attitudes resulting from the regulations introduced in sleeping sickness areas generally. Among these regulations were provisions enabling registration and regular inspection of the entire population in tsetse-infected regions to be carried out. These procedures have not only been of value in the collection of data concerning disease incidence but have made it possible to obtain vital statistics generally with a greater precision than was previously possible. The administrative measures specifically designed to control sleeping sickness played an important part in producing an outlook favourable to preventive medicine. The issue of permits to persons wishing to enter or leave dangerous areas helped to keep potential carriers under surveillance, and enabled the source of some sporadic outbreaks to be traced. One curious result has arisen from the system under which the local community accepts responsibility for the maintenance of bush clearings to reduce the fly risk around centres of human activity and at road-river crossings; this system is now so widely accepted as a normal obligation that there would be serious suspicion if it were to be discontinued, even in places where clearings can no longer be regarded as effective forms of control. Elimination of tsetse is in the final event a matter of land usage. Recognition of this has led to such admirable examples of planning as the Anchau Corridor in Northern Nigeria; here, the whole pattern of settlement, communal services, cultivation and animal husbandry has been organized so as to create conditions which are not only inimical to the tsetse but which provide a sanitary

environment notably superior to that in which the community had previously been living. In East Africa, movements of population from infected areas have sometimes led to radical changes in the mode of life, such as the transformation of fishermen into agriculturalists.

Turning to the problem of malaria, in which tropical medicine has achieved some of its most notable successes, we find ourselves confronted with a complex situation. In many parts of tropical Africa, including Uganda, the infection is hyperendemic—that is, transmission is so frequent as to lead to the development of a high degree of resistance to the infection among those who have been constantly exposed to it from birth onwards. Under these conditions, seasonal fluctuations of the disease are not conspicuous, as they are in areas where immunity falls during times when absence of anopheline breeding leads to temporary suspension of transmission. Of course, symptoms attributable to malaria are always liable to occur among the indigenous populations of hyperendemic areas; it often happens that an individual who has built up a fairly effective resistance will show signs of malarial infection if his general level of health is lowered by an attack of some other disease, or by physical injury, or by malnourishment. We can readily see that malarial infection in these regions must be a serious factor in producing morbidity and mortality; firstly, by its effects on infants during the process of acquiring resistance, and secondly, by its ability to cause incapacity in adults whose resistance has been depressed. Unfortunately, although effective control methods exist, their cost is so high as to restrict their use in undeveloped territories where the majority of the population are scattered widely over rural areas. The cost of interrupting malarial transmission in such conditions would in some cases approximate to the total sum available annually for all medical services. It does not need much imagination to see that these territories may have great difficulty in finding the money needed to introduce a comprehensive control scheme without reducing other important public services. Measures of this kind, while eminently desirable, have to be governed by the availability of money. In Uganda, where the rural population has for centuries lived in a state of wide dispersion over the countryside, it will clearly take a considerable time for the people to adapt themselves to the more concentrated forms of settlement which lend themselves to malarial control at reasonable cost. Old habits die hard, and that of living close to a small-holding is no exception. Endemic malaria of the seasonal type, with its relatively low human immunity and high annual morbidity, is a different matter; expenditure on control, although initially high, soon pays dividends through the resulting increase in working capacity and productivity.

Anopheline control is generally practicable in towns, and it is here that tropical medicine has done so much to transform the social situation. It is not many years since town-planners in Uganda and elsewhere were attempting to segregate races in urban areas, with the object of putting as great a distance as possible between the non-immunes and those hardier citizens whose families were a reservoir of parasites. Segregation as a means of reducing the risk of malarial infection in townships has been replaced by effective anti-anopheline

measures and drug prophylaxis, and large populations of non-immunes nowadays live in vigorous health where formerly they were debilitated by frequent attacks of malarial fever. Within the past thirty years conditions have been produced in which administrative, professional and technical workers can maintain their health and efficiency while applying themselves to the task of developing services and guiding the local inhabitants to make better use of their resources. These successes in prevention and treatment have had other results. The great reduction of what was undoubtedly the most important single factor influencing the ability of non-immunes to remain healthy in a tropical region has favoured a rapid increase in the numbers of European and Asian inhabitants, a group which had suffered severely in former days. This increase, while making a disproportionately large contribution to the general prosperity, was bound to excite suspicion and xenophobia. So it can be seen that our success in building healthy urban communities, which have done so much to enable Africans to take their place in the modern world, may help to produce political problems of a well-known kind.

In the case of leprosy, a disease which is widely distributed throughout most of tropical Africa, advances in treatment and control have led to marked changes in social attitudes during the last few years. Formerly, little could be done to cure the condition, and prevention by isolation of the sufferers was difficult to organize on an adequate scale. But with the introduction of the sulphone drugs the situation improved rapidly. In Uganda, a few devoted mission workers have for many years maintained settlements, aided by the Protectorate Government and the British Empire Leprosy Relief Association. Encouraged by the success of the new drugs, African local authorities have now been enlisted as partners to help in the operation of a plan which should go far to reduce the incidence of the infection. Surveys were made by a Government specialist, who is responsible for co-ordinating the attack on the disease, and the results enabled the siting of treatment centres to be decided; settlements are being established near these centres, so that patients can live within a reasonable distance while undergoing treatment. These settlements, for whose maintenance the African local authorities will ultimately be responsible, are producing an increasing proportion of their own food supplies and should in time become largely self-sufficient in this respect. In some places the local authorities have taken the initiative in establishing settlements, with very satisfactory results. One of the most gratifying developments arising out of the Government's educational campaign on leprosy has been a new social awareness of the implications of the disease, particularly as regards prevention. Along with this, a community spirit has become perceptible among the inhabitants of the settlements, replacing the usual tribal intolerance. It may prove that the discovery of the anti-leprotic properties of the sulphones, leading to the establishment of organized settlements near treatment centres, will enable the advantages of village life to be more generally recognized. Apart from the attack on the disease in its active form, the importance of domestic segregation is being increasingly accepted. The practice of providing a separate sleeping hut for an infected member of the family who

for one reason or another cannot be admitted to a settlement is growing steadily. This measure alone, if adopted on a sufficiently wide scale, would produce a great reduction in the transmission rate. All these activities are being intensified and are rapidly changing the popular attitude towards leprosy; there is good hope that, with their extension, the incidence of the disease will soon become a fraction of what it is at present.

When a new factor is introduced into a biological system, especially a system in which man is a component, the consequences are not always what one expects. For instance, the highly successful policy of moving the population from tsetse-infested islands led, fifty years later, to the charge that the move was a diabolically subtle arrangement to enable trypanosomiasis to be kept alive in its original haunts, ready for re-introduction to the mainland if the population became obstreperous. The modern use of aerial dusting to control insect vectors of disease was similarly interpreted in some quarters as evidence of evil intent, in spite of careful public explanations. But distortions of this kind are neither new nor confined to Africa. I should like to give a short account of one recent project which gained nothing but gratitude and which showed what could be done to overcome an insect disease vector which was distributed over a large tract of country.

The land bordering the Victoria Nile between Lake Victoria and Lake Kioga, a distance of some 45 miles, has for many years been the hunting ground of a small blood-sucking fly, appropriately called *Simulium damnosum*. This fly breeds in large numbers in the aerated river water, and spreads far and wide throughout the neighbouring countryside. It is often found over thirty miles from its breeding places. Not only does the fly inflict injury which is painful and irritating out of all proportion to its size, but it transmits a filarial worm which causes a chronic inflammation of the skin. In some cases the worm also damages the eye, and blindness is not an uncommon sequel. As a result of experiments in Kenya, Canada and the Belgian Congo, it was found that low concentrations of D.D.T. introduced into the river water, or sprayed on the vegetation on river banks, were capable of interrupting the life cycle of *Simulium*, and it was decided to attempt to control the fly in the Victoria Nile by this means. In 1953 the insecticide was introduced into the river from a launch, the aim being to achieve a concentration of some 0.5 parts per million of D.D.T. over a period of thirty minutes, repeating this dose weekly on six occasions. The source of the river, where it falls away from Lake Victoria, is over 200 yards wide and the mean flow of water is approximately 600 cubic metres per second. In the event, the treatment produced dramatic results. The flies disappeared completely from the scene within a few weeks, not a single larva being found after careful examination of breeding places along the 45-mile stretch of river where they had previously existed in millions. In places where over 200 adult flies were being captured per hour before the operation, not a single fly was found three weeks later. Although there has since been some evidence of re-infestation, it seems likely that a highly irritating and dangerous pest can in future be kept under control, if not eliminated completely, by a simple and inexpensive form of

treatment. The effects of this project have already been felt over an area of some 1,500 square miles of valuable land, which had become sparsely populated because of the high density of *Simulium*. The incidence of worm infestation due to the fly was as high as 100 per cent in some areas, which meant a heavy degree of incapacity. Now, as a result of fly control, there is every reason to expect the growth of a stable community of healthy cultivators in the neighbourhood of one of the major hydro-electric power centres of Africa, with consequent benefit to developing industries. The success already gained has naturally evoked great enthusiasm among the people who were freed almost overnight from the attacks of a vicious insect. Indeed, there must be few health measures which can produce such gratitude as the control of this particular pest.

Another scheme for the control of an arthropod-borne infection in Uganda was introduced recently, with good results. This involved the use of gammexane against the domestic tick, *Ornithodoros moubata*, which transmits relapsing fever. The interesting feature of this scheme was that it was partly financed by an African District Council. This shows how some African local authorities are recognizing the value of new methods of disease control, even to the extent of sharing the cost of a project which would have been regarded with deep suspicion only a few years ago.

On the preventive side of tropical medicine, the task of persuading a largely rural population to adopt more hygienic customs has been formidable to a degree. The problem was to find effective means of convincing Africans that there was little value in getting cured of a disease if they returned to the same environment and behaviour which led to their becoming ill. The major environmental defects were bad houses, lack of sanitary arrangements, and dangerous water supplies. Mud and wattle houses of poor construction, lacking proper foundations, were generally damp, ill-lighted and badly ventilated, often shared with farm animals, without cooking facilities worthy of the name, surrounded by scraps of domestic refuse, and happy homes for rats, ticks, bugs, fleas, and other undesirable fauna. Often overcrowded, they favoured the transmission of plague, meningitis, relapsing fever and respiratory diseases, to say nothing of yaws, leprosy, and a host of skin infections. Similarly, lack of domestic sanitation, together with the unprotected sources from which water was drawn, led to a high incidence of enteric and dysenteric infections and worm infestations. These sequences of causes and effects are hard to bring home to illiterate people. Nevertheless, the patient work of the Uganda health staff has been steadily productive, and their efforts in recent years have been greatly strengthened by carefully planned shows which are now a regular feature of district life. These shows are organized jointly by Government departments, which generally include medical, agricultural, animal husbandry, and community development departments. They normally last a week and make liberal use of posters, models, cinema films, informal talks, and practical field work. Their popularity has been high, and the policy of restricting the health teaching at each show to a single subject, such as domestic sanitation or house construction or the protection of water supplies, has earned good dividends. The standards of environmental sanitation

have risen very noticeably, and many people now show real pride in their homes. Housing is an acute problem in peri-urban areas, where unskilled labourers often live in highly insanitary and overcrowded surroundings. Governments are very much alive to the situation, although it must be admitted that the solution of what is frequently a most complicated political and economic tangle is not likely to be achieved quickly.

All the activities which I have mentioned have been paralleled and aided by one special service of immense importance—the training of Africans in the various branches of medical work. During the past thirty years, schools have been set up to train African doctors, health inspectors, nurses, midwives, laboratory technicians, and so on. Thus, the Uganda Government now employs over 900 trained African workers, including 47 doctors, 95 health inspectors, 682 male and female medical assistants and nurses, and some 180 ancillary staff of various kinds. Although small in relation to the needs of a population of over five millions, this body of men and women forms a useful nucleus from which the country's medical services can steadily be expanded. Their effect on social attitudes is growing rapidly, and represents one of the major contributions which tropical medicine can make to a backward country.

As one can readily see, the tracing of relationships of cause and effect in a context of this kind is far from easy. The reactions between the two biological systems, one of which is the dispenser of tropical medicine, the other the recipient, are indeed highly complex. My few haphazard examples, with some generalizations based upon personal interpretations, must necessarily be superficial. But even if I am unable to analyse the situation as nicely as I should wish, these illustrations should help to convey some idea of the kind of results which our work so far has produced. Thus, the introduction of an effective anti-syphilitic treatment facilitated the acceptance of modern medical services; sleeping sickness and leprosy control measures have helped to promote ideas of communal responsibility in regard to disease prevention, while furthering demographic study and reducing tribal antagonisms; urban malarial control has had great success in the production of conditions in which administration, social services and industries could develop efficiently; the dramatic control of disease vectors by modern insecticides has created a demand for the extension of these operations, in which African local authorities have already participated; the prevention of disease by environmental measures has been intensified by many communities, stimulated by mass health education aiming specially at the improvement of housing, water supplies, and sanitation; and lastly, the local training of medical and health staff has not only enabled effective techniques to be applied more widely than would otherwise have been possible but is helping to create an informed public opinion. It would seem justifiable to conclude that our policy of tackling tropical disease by an integrated use of preventive and curative measures has had some success in creating a healthier society. The long-term results of our efforts are hard to predict. For the immediate future, our chief concern must be to find means of helping these growing populations to obtain additional food supplies, recognizing that their growth has not been unaffected

by the conditions brought about under our administration and by our application of the principles and methods of tropical medicine.

DISCUSSION

THE CHAIRMAN: By the strength of your applause it is obvious that you have appreciated the trouble Dr. Hennessey took in preparing his paper and the charm with which he delivered it. I am now going to call on Sir Philip Manson-Bahr to be so kind as to open the discussion. As many of you know, Sir Philip is the son-in-law of the late Sir Patrick Manson, the father of tropical medicine, and the mantle of Elisha certainly fell on Elisha, as I found when I sat at Sir Philip's feet in the early 'twenties learning tropical medicine from him.

SIR PHILIP MANSON-BAHR, C.M.G., D.S.O.: I would like to congratulate Dr. Hennessey on what can be called a pep talk, because at the present time such talks are of great political significance. I would like to plagiarize what the late Sir James Cantlie wrote, and sing 'His heart's in Uganda a'chasing the fly, the trypanosome trembles when Hennessey's nigh'.

I have lived long enough to see this victory by tropical medicine which we have witnessed during the last fifty years. When I was at Cambridge we were told by Professor Dixon that there were only two specific drugs in the pharmacopœia, quinine and mercury. Now we have a list as long as your arm, and the more specific they are the more expensive they become.

In travelling round a bit lately I have come to feel that we must let the world know what British workers and scientists have done for the good of humanity at large. We must not be hindered by our innate modesty, or let our reputation be besmudged by false propaganda. The Russians' record of work for humanity gives them nothing to talk about, while the British, who are attacked as 'colonialists', have almost banished malaria, and this is only one among many other major achievements in this field. I myself have seen the enormous transformation wrought in this way in Malaya. Unfortunately the native public press will not publish facts of this kind.

No doubt modern therapeutics can work wonders. I should like to tell you also about the faith that now has been inspired by some of these drugs. A friend who was travelling on the Amazon was imprisoned by a tribe of Carib Indians. Later he was taken to a woman who lay in labour, in great agony. He was asked to cure her. He gave her the only two quinine pills he had. Afterwards he was acclaimed and loaded with honours: the patient had safely given birth to twins. One pill, one baby, they said! Faith of that sort has obviously also been evoked in Uganda by Dr. Hennessey and his staff.

LADY MOORE-GUGGISBERG, C.B.E.: When I was in Uganda the sleeping sickness was pretty bad and I was told then that much of it came from the crocodiles, which the authorities were trying to get rid of. I was very surprised still to see corrugated iron roofs on the houses. They are awful to live under whether in any climate.

THE LECTURER: I can only say that the trypanosomes which cause sleeping sickness in man are quite distinct from those which are found in crocodiles, and there is no possibility of cross infection. As far as corrugated iron roofs go, I agree that they look shocking. But they have one great advantage—they are not easily set on fire; and in a country where one's enemies may cause rapid destruction of life and property by putting a match to a thatched roof, corrugated iron has got quite a lot to be said for it. Tiles, of course, look much better.

DR. H. DE BOER: From 27 years' work in East Africa, trying to do what Dr.

Hennessey has outlined, I can confirm that he has not in any way overstated his case. In fact he has been very careful to make an understatement wherever he could.

The important part is the curative side of medicine, but to my mind, as a person who went to Africa primarily to work on preventive medicine—although later on I had to combine the two sides of medicine—it seemed that the time spent was only a means of gaining the confidence of the people, with a view to teaching them; I would say that very great success was achieved. It is important I think to appreciate that it is only 100 years since Livingstone walked out to the falls at Victoria and it is not much more than fifty years since the flag was raised in Uganda and it became a British Protectorate. All this progress has been made in very little more than fifty years.

I think that Dr. Hennessey, in talking about doctors, sanitary inspectors and other medical staff, and all the progress made in the last seven or eight years, did wish to advocate here that medical work, sanitary work, and so on, only became possible because we had the very considerable sympathy and backing of the administration.

THE CHAIRMAN: I think that everyone would agree with Dr. Hennessey that it is not at all easy to establish a line of demarcation between tropical medicine and diseases on the one hand and medicine and diseases of temperate climates on the other. Plague and cholera are two instances of diseases that used to be common in temperate climates. All of us have probably read of the devastating epidemic of plague in this very city in 1665 and 1666, when the only sounds heard in the streets were the cries of 'bring out your dead, bring out your dead', and the rattling of the dead-carts over the cobblestones.

A few hundred yards from my Hampstead house stands a dispensary which was built with the donations of erstwhile parishioners in thankfulness that divine Providence had saved their lives from cholera which was rampant in the neighbourhood in the middle of the last century. Cholera is rarely met with in temperate climates now and I cannot remember myself a sizeable outbreak of plague in this country since before the First World War.

Dr. Hennessey suggested that the advent of Western drugs associated with the name of that famous German scientist, Ehrlich, had played a considerable part in convincing the African peoples of the value of Western medicine by the power of these drugs to cure certain diseases and to enable mothers to have healthy babies. Our lecturer, I think, mentioned that he felt a strong blow had been struck at the witch doctor, or to use his own words, 'had succeeded in reducing the ascendancy of an established system of magic'. But for this, no doubt, the Mau Mau horrors in Kenya might well have been multiplied. In West Africa the spectacular disappearance, at any rate of the outward manifestations, of yaws, a very disfiguring disease, by the administration of Sobita at the cost of a penny or two, convinced the average African of the superiority of European medicine over the African counterpart. Nowadays, antibiotics are, of course, used instead.

Dr. Hennessey wisely contended that tropical disease can only be successfully fought and overcome by what he referred to as the integrated use of preventative and curative medicine; I imagine that, with the preventive side, he also included the investigational aspect.

And now it is my great pleasure, on your behalf and on my own, to thank Dr. Hennessey very warmly for his paper.

A vote of thanks to the Lecturer was carried with acclamation, and the meeting then ended.

LATIN-AMERICAN ARCHITECTURE

A paper by

HENRY-RUSSELL HITCHCOCK, A.M.,
*Professor of Art, Smith College, Northampton,
Massachusetts, U.S.A., read to the Society on
Wednesday, 14th December, 1955, with Sir Alfred
Bossom, Bt., F.R.I.B.A., M.P., a Treasurer of
the Society, in the Chair*

THE CHAIRMAN: I think we are going to have an unusual and a very desirable paper this afternoon, on something which I think it is important for us to know more about than we do to-day. Professor Henry-Russell Hitchcock has a reputation in America as regards architectural subjects, and as an architectural historian, which is not exceeded by anybody else. I speak with a lot of knowledge on that subject for I lived in the United States for many years and have seen the work he has done, which has brought him great credit. He has been lecturing regularly before two at least of the most critical audiences I suppose there are in that part of the world—two of the leading women's colleges—and one really cannot find a tougher group of critics than those young people from Vassar and Smith Colleges. First he was at Vassar and then at Smith, the latter since 1948. Then again, he was a lecturer at the Massachusetts Institute of Technology which, as you know, is probably the leading technological institute in the United States, or on the North American continent for that matter, and they do not retain professors who are not awfully good. He was awarded the Guggenheim Foundation Fellowship, 1945-46, and that is only given to great and very successful artists either in poetry, architecture, writing or subjects of that nature. He has looked after architectural exhibitions in the Museum of Modern Art in New York, and anybody who has been to New York knows what that means. He has lectured in the Institute of Fine Arts at New York University and he is a former President of the Society of Architectural Historians.

The following paper, which was illustrated with lantern slides, was then read:

THE PAPER

Latin America includes a vast territory extending for a continent and a half. Although its geographical area is equal to that of all Europe and Anglo-Saxon North America together, large districts consist of high mountains, deserts, and jungles, and the total population is not at present very great. However, the rate of population growth, three per cent a year, is producing very marked changes not always, unfortunately, compensated for by a comparable economic expansion. Mexico City and Rio de Janeiro are both larger than Rome, and only two cities in the United States are larger than the four largest in Latin America.

Despite the size and the growing importance of Latin America in the world, it is undoubtedly true that its affairs impinge upon most people's consciousness largely in terms of the recurrent political disturbances, nor are these endemic changes of *régime* without relevance to architecture. Perón's rule in Argentina was not conducive to a lively architectural activity. It is to be hoped that Argentina

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will now once again take its rightful place as one of the cultural leaders of the Iberian world. Economic troubles have somewhat diminished activity in Brazil in the last few years, but the effect of inflation has been to encourage private building, which proceeds at a tremendous pace, even if funds for public buildings have been cut down.

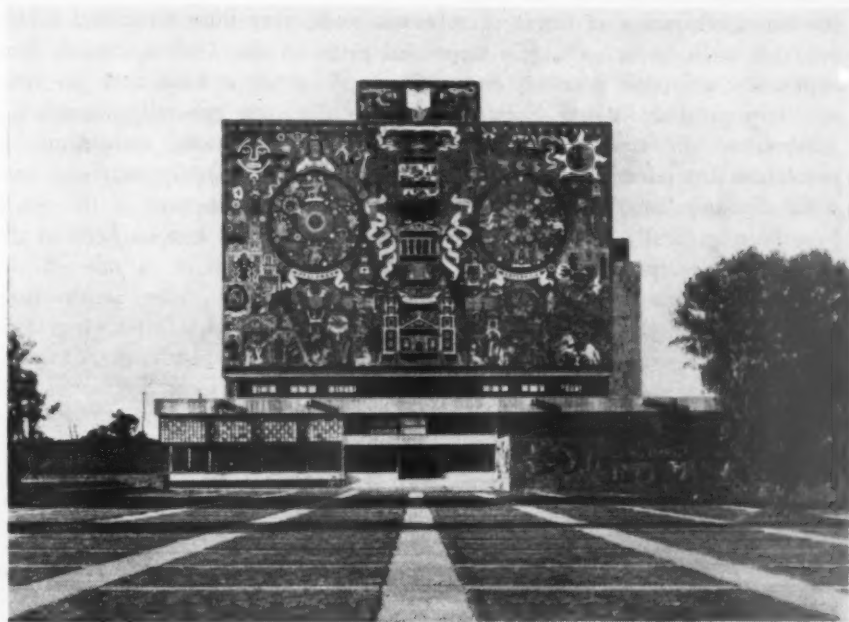


FIGURE 1. *Juan O'Gorman, Saavedra and Martínez de Velasco: University Library, Mexico City, 1951-1953 (Mosaics by O'Gorman also)*

Whatever may be said against the characteristic *régimes* of Latin America, there is no question that the President-Dictators have generally seen in architecture, like the sovereigns of the European past, a means of personal aggrandizement. The famous University City in Mexico was intended as a monument to Alemán, whose thirty-foot statue dominates the campus. This perhaps explains why, although the buildings are largely physically complete, so few of them have been put into service by a later *régime*. Public housing is generally pushed by the various Governments, but it is at least doubtful whether the allotment of dwellings is not restricted by political considerations. In Mexico the most impressive housing developments are for Government employees and elsewhere I fear that it is generally members of the Government party who are housed first.

I think, however, in considering Latin-American architecture, we may properly disregard the political background and its social results while recognizing that the local situations permit and encourage certain types of achievement and discourage others. The interest of Latin-American architecture for the outside

world lies in what it has been able to produce under material conditions which are distinctly difficult. Except in Mexico to a modest extent, for example, no structural steel is produced in Latin America and there is little hard currency with which to pay for imported structural elements when so many mechanical facilities have to be imported. But the limitations produced by the absolute or relative lack of various building materials go further than this. Despite the enormous areas of forest there seems to be very little structural timber available such as is so largely depended upon in the United States. Nor, apparently, are there good building stones, at least not at hand near the most heavily-populated districts. Even burnt clay products are generally, though not universally, of very inferior quality. Thus Latin-American architecture is peculiarly dependent on reinforced concrete and is generally surfaced with some sort of painted rendering, as indeed buildings in this part of the world have been generally, not only since the Colonial period but in Peru in the lowlands since prehistoric times. Not surprisingly, colour is one of the characteristic positive qualities of much of Latin-American architecture, but painted rendering has its difficulties, particularly in countries where standards of maintenance are appallingly low. Hence there has been, of late, great interest in glass and tile mosaic, using materials imported first from Italy, but now largely produced locally. You will see, therefore, why Latin-American architecture tends to resemble that of the Latin countries of Europe more than that of



FIGURE 2. *Oscar Niemeyer: Own house, Gávea, Rio de Janeiro, 1953-1954*

Northern Europe or the United States owing to certain parallelisms that are material, although these parallelisms are, of course, supported by a cultural tradition.

It is a long time since the Latin Americans found much cultural inspiration in the Spanish and Portuguese homelands. From early in the nineteenth century they transferred their affections to France and there was probably, at the opening of this century, no part of the world in which the influence of the Paris *École des Beaux Arts* was stronger than in Latin America. Nor has that influence entirely disappeared even yet. It is perhaps significant that with architects over fifty, if one knows no Spanish, one talks French. With architects under fifty one talks English. A very considerable proportion of them, indeed, have been trained at least in part in the architectural schools of the United States, although some of the Latin-American schools, notably those in Chile and in Uruguay, are of excellent quality.

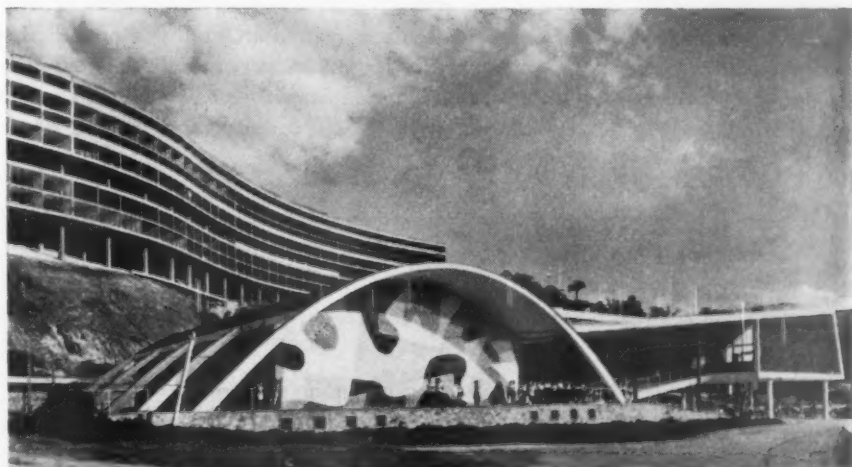


FIGURE 3. *Affonso Reidy: Primary school and gymnasium, Pedregulho, Rio de Janeiro, 1948-1950. (Housing block in construction behind)*

The geographical range of Latin America is very great, yet there is less variety of climatic conditions in the architectural centres than in the United States. The great altitudes at which several of the principal capitals are located—Caracas 3,000 feet, Mexico City 7,500 feet, Bogotá 8,000 feet—affects their climate, and although they lie fairly close to the Equator they are not hot-tropical but warm-temperate. Except in the Caribbean area, the capitals that lie at sea level, Rio de Janeiro, Montevideo, Buenos Aires, Lima, are far enough south so that they are not characteristically tropical.

However, throughout much of Latin America the sunshine is intense, if not continuous, and protection against heat and glare is a major problem which has already had considerable effect on architecture. The various types of sun-break,

some of them inherited from the Colonial past, some of them newly developed, and the general use of colour give buildings a very different flavour from those of the United States or Northern Europe. The general use of concrete has also encouraged the development of shell-vaulting. In this field engineers like Candela of Mexico, a Spaniard, and Delpini of Argentina, an Italian, have made a major contribution. The curved skylines such forms produce give a certain lyricism to many buildings, not least to things like stadiums and even factories, which are generally the work of engineers. Particularly in Brazil, which is the country that first developed a modern school of its own, curves are very frequent nor are they restricted to vaulting forms. As everyone is aware, Oscar Niemeyer particularly is much addicted to the use of curves in plan, but he is not alone in this. Reidy's work, which is less known, can be almost equally lyric.

Latin America is much less ethnically homogeneous than might be supposed. This is not so much because of the very large Indian population, which so much affects the social and political scene. It is really only in Mexico that the cultural contributions of the Indians can be sensed in architecture to-day. But in most countries there have been from Colonial times many immigrants of non-Iberian origin. German and Italian colonies are large and important in most Latin-American countries and architects of non-Spanish or non-Portuguese descent

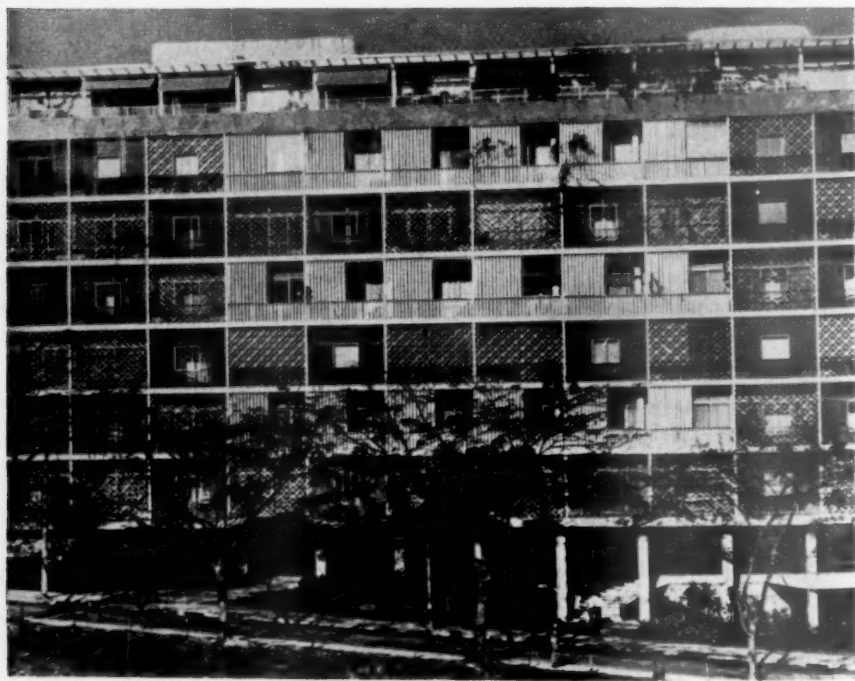


FIGURE 4. *Lucio Costa: Apartments, Parque Guinle, Rio de Janeiro, 1947-1953*

almost outnumber those whose names, at least, indicate a long local descent. However, the Latin-American melting pot, particularly in Brazil, really seems to melt, and one will find nothing particularly English or American in the work of architects in other countries who may happen to be named Williams or Jones, Garland or Davenport.

Although there are some Protestants, and in certain areas considerable Jewish communities, the Catholic Church provides the major element of cultural continuity and homogeneity. As an institution it is not important as a patron of good architecture to-day. There are probably more good modern Catholic churches in the United States than in all of Latin America. It is significant that Niemeyer's São Francisco at Pampulha, world famous almost since its completion ten years ago, has never been allowed to be consecrated by the Bishop. The influence of the church is seen, however, in the very large families which necessitate types of house planning unfamiliar in the northern world, not least because in most countries it is possible to balance the size of the family with hordes of ill-paid Indian servants. However, the most potent influences on domestic architecture derive from Iberian traditions. Oscar Niemeyer himself may live in a glazed pavilion, but characteristically houses are closed against the outside world, opening inward on a *patio* rather than on to surrounding lawns. Indeed, because of the generally mild climate the *patio* is the real living room. Thus the houses in many cases are very different from what would be comfortable or convenient in more northerly countries.

The need for sun control gives a very characteristic flavour to office buildings and it must be admitted that the results are frequently more interesting than where such façades are devoid of three-dimensional play. The amount of production in this field, particularly in Mexico City and in São Paulo, is fantastically great. The total impression of a newness in the cities peculiar to the mid-twentieth century is hardly equalled elsewhere in the world, not even in Houston in the United States or Milan in Italy. Naturally only a few of the skyscrapers are of notable individual quality, but the general level is surprisingly high and, I think, rising. Certainly the Polar Building by Vegas and Galia, with its screen walls cantilevered out 11 feet on all sides from four ferro-concrete piers, is a notable work, not least because of its isolated position way up town in Caracas, a city that is growing more rapidly even than São Paulo or Mexico City. Vegas studied under Mies van der Rohe at the Illinois Institute of Technology, and the Miesian character of this building strikes a relatively new note in the Latin-American scene where Le Corbusier had previously been the most notable single influence from abroad.

Le Corbusier was called to Rio in 1936 to prepare a plan for the new University City. He was also the consulting architect on the Ministry of Education and Public Health, the great modern building which first called the attention of the outside world to the architectural potentialities of Latin America. Le Corbusier is also the one major European architect who has actually built in Latin America. His house for Dr. Curuchet at La Plata (formerly known as Eva Perón) in Argentina, is not at all Latin American in character and makes evident by



FIGURE 5. *Vegas and Galia: Polar Building, Caracas, 1952-1954*

contrast how far the Latin Americans in the last twenty years have made of their own modern architecture something native and not imported.

Considering the general penury of public authorities in richer countries, it is gratifying to note that Latin Americans take architecture seriously as an art, expecting far more from their architects than purely functional solutions. The results in public buildings are not always happy, however. The Ministry of Communications and Public Works in Mexico City, with its loud external mosaics, is very inferior indeed to the refinement of Costa's Rio Ministry, begun in 1937, with its characteristic *azulejos*, that is, murals of blue and white tiles, by the painter Cândido Portinari.

Certainly the general use of external murals, generally of mosaic in Mexico and in Venezuela, but of *azulejos* elsewhere and particularly in Brazil, is one of

the most notable signs of the Latin-American liking for visual luxury in architecture. Considering that they operate within the broad frame of reference of modern architecture as it is understood internationally, a frame of reference that is generally rather æsthetic, the richness of form and colour is very notable, as is the fact that the finest local painters such as Portinari in Brazil or Mérida and O'Gorman in Mexico, are regularly employed to collaborate on buildings. At the University of Caracas, moreover, Carlos Villanueva brought in several distinguished foreign artists. The amazing ceiling of the University auditorium is the collaborative product of himself, the American sculptor Sandy Calder, and the acoustic technician Robert Newman. He has also used stained glass and mosaics by Léger and sculpture by Arp and by Pevsner, as well as many other associated works of art by younger local artists. Although not as extensive as the highly publicized University City of Mexico, Villanueva's at Caracas has several other fine buildings in addition to the auditorium and its associated Plaza Cubierta.

The University City of Rio is not yet as far advanced. Rather amusingly, the only building which is completed and functioning is a nursery school and child centre! This, like the three other enormous buildings in construction there, is by Moreira, an architect who is closer in the restraint of his work and the refinement of his finish to Costa than to the more slapdash Niemeyer. Certainly Moreira's and Costa's apartment houses, although not on the famous Copacabana Beach, are the finest apartment houses in Latin America, and are hardly rivalled elsewhere in the world. But apartment living is, except in a few of the biggest cities, still rather a novelty.

There are notable differences between the various Latin-American countries. The buildings of Mexico, whether downtown on the Paseo de la Reforma or out at the University City, are loud, bold and generally badly built. The best Mexican houses, however, such as those of Sordo Madaleno, Artigas, and Barragán, are notably quiet and most happily related to their gardens, which as I have said actually provide the normal living area. In the Jardines del Pedregal Estate, laid out by Barragán outside Mexico City, the landscaping is about all one sees since the houses are characteristically hidden behind tall and unbroken walls of dark lava. But here Barragán has created one of the most beautiful residential suburbs in the world. His own house in the city is so enclosed that it almost has no exterior but the interiors, although wholly Mexican in their derivation, have a quality of craftsmanship such as a Webb or a Voysey might have appreciated. Yet it is perhaps characteristic that Barragán speaks no English.

The architecture of Bogotá is very different from that of Mexico City. The cool wet climate offers the architects problems familiar in England and in the United States, and the Colombian temperament seems to be also cool and almost Anglo-Saxon in architecture, if not in politics. Here construction is extremely sound. Buildings are beautifully finished, whether with elaborate handling of the concrete elements, as in the work of Violi, a pupil of Perret, or more simply in the University buildings and skyscrapers of Serrano. Good brick and good building tiles are available here, although the stone which has

been used for surfacing many buildings tends to streak badly. There is little use of painted colour. However, bold shell-concrete construction is to be found in stadiums, such as that at Cartagena, in hippodromes, industrial plants, and even houses. The Colombians lack the intensity of personal expression of the Mexicans and the Brazilians, but their work is very competent and less different from that of areas more familiar to us.

Peru, the most Spanish city of Latin America, has a good deal of contemporary building, none of it as yet of much quality. Particularly in photographs, where the delicate colour effects cannot be appreciated, the excellent public housing may appear dull despite the evident scope of the projects.

The more southerly countries have, on the whole, been the most conservative. Chile has two excellent architectural schools, and as a result has groups of young architects whose careers are just getting under way.

In Uruguay, socially the most advanced Latin-American country but perhaps as a result less spendthrift in architecture, there is one of the few buildings of great interest, by an architect, now dead, of the older generation, Vilamajó. He was, with Niemeyer, a consultant on the U.N. Building in New York. A club house and a group of houses at a seaside resort in Uruguay, Punta Ballena, is more properly to be considered Argentinian than Uruguayan because the work was done by Bonet, a Spanish-born architect settled in Buenos Aires, for Argentinian clients. Building activity is increasing in Uruguay, and the Ramblas along the beaches, though by no means as built up as the Avenida Atlántica along Copacabana Beach in Rio, have several apartment houses by Sichero of better quality than those common in Brazil.

The countries of Central America and the Caribbean Islands are neither as large nor, on the whole, as prosperous as those of South America. Panama's University City, though modest in scale, has excellent buildings by De Roux. A large resort hotel there, the El Panamá, is by the New York architect Edward Stone. A similar resort hotel, the Caribe Hilton in Puerto Rico, a United States dependency, is by the local architects Toro-Ferrer, who are also responsible for the new airport and the Supreme Court building. These hotels rival the Skidmore firm's Istanbul Hilton as among the most advanced in design in the world. A Frank Lloyd Wright pupil, Henry Klumb, is also working in Puerto Rico, where he has been responsible for the Library and several other buildings at the University of the Commonwealth as well as for the plan for expansion, almost rivalling those of the other Latin-American University Cities, which the Chancellor Jaime Benites has projected.

Cuba has, in Havana, a city showing something of the spectacular growth of Mexico City, Caracas, and the Brazilian metropolises. There is also here an excellent Government building by Capablanca. The most striking Cuban building, however, rivalling Niemeyer's in its bold use of curved forms, is the Cabaret Tropicana by Borges, who received his training, incidentally, entirely in the States at Georgia Institute of Technology and under Gropius at Harvard, although his building seems almost more intensely Latin-American than any in Mexico or Brazil.



FIGURE 6. *Max Borges, Jr.: Cabaret Tropicana, Havana, 1953*

Although Latin America came late to modern architecture, the last twenty years have seen an increasing acceptance of its general principles. That acceptance, however, has not levelled off local qualities. On the contrary, Latin America has developed certain features which are well worth the emulation, at least, of architects in other parts of the world. Henceforth it will be as desirable for architects in other countries to keep informed of continuing developments there as in Europe or the United States. It is a matter of opinion whether the lack of dominant architectural leaders such as Europe and the United States have is an advantage or a disadvantage. Moreover, it is quite likely, in a part of the world where architects find themselves building skyscrapers before they are out of their twenties, that among the youngest generation will arise new leaders as notable as Costa, Niemeyer, and Villanueva among those who are now established. Certainly one feels in Latin America, even at this late date, some of

the excitement of rising achievement that there was in several European countries in the 'twenties, or in this country in the late 'thirties, an atmosphere of excitement which one hopes will be equalled again here now that production in so many fields is reviving once more.

DISCUSSION

THE CHAIRMAN: I think this is one of the most striking papers I have ever heard in this room. The Professor has given us a picture of another vast continent, the work of which is, I believe, almost unknown to practically everybody in this room.

MR. A. C. CHAPPELOW: The buildings seem very plain. Can the lecturer tell us if there is any sort of decorative treatment generally?

THE LECTURER: I did not show many interiors. There is a great deal of use, particularly in Brazil, of rich landscaping and there are mosaic tiles, which are likely to be used outside. I showed a semi-interior of the Moreira school, but on the whole Latin Americans live more out of doors than in. It is a characteristic of their houses that the real living space is the garden. There is quite a surprising number of high-grade associated works of art. In the forecourt of Sordo Madaleno's house there is a tremendous—twice life size—bronze crucifix by Max Goeritz hanging on one of the walls. This is likely to strike non-Mexicans as somewhat excessive in a private house: I showed also that big Calder mobile hanging in the Hime house by Henrique Mindlin. I think I saw more large Calder mobiles well installed in Latin America than I ever have in the United States. In Santiago, in Chile, in the house of Larrain, the Dean of the School of Architecture, a whole wall of the library has not one but two murals by Matta. Unfortunately one is on top of the other because Matta came back after he had changed his style and repainted the mural on top of the earlier version. Thus there is a luxurious use of rather high-grade works of art such as is rare in other countries.

MR. IAN MCCALLUM: What is the reason for that missing floor in that apartment block in Caracas?

THE LECTURER: I cannot quite puzzle it out myself. I think that, if you trace the idea it goes back to the fact that at Reidy's Pedregulho the block is entered at middle level, therefore it has an open storey there. That, I think, goes back to a Le Corbusier project for Algiers. But why it was done at the Cerro Grande is not clear to me. Even after being there and later studying the section of the building, I still think that it is forced.

MR. V. HOWLETT: From what I remember of photographs of Latin-American buildings, I expected to find a large number of public buildings in Baroque style. Is the Baroque style entirely dead in Latin America?

THE LECTURER: I should say Baroque died in Latin America 150 years ago. There was a slight local revival in the 1890s but it hardly cut through the Parisian control of design. Then there was a rather strong influence of the *Art Nouveau*, which seems to have reached there in the Italian version of *stile floreale*. There is a good deal of that, and of course it tended to merge with the Baroque tradition in cities such as Rio and Havana. In Havana it almost reaches Gaudian lushness at times. If you do not use too historical a definition of Baroque I should say that, relatively speaking, the bulk of the contemporary architecture of Brazil was rather more Baroque than in other places. The use of curves in plan is certainly Baroque and yet I feel that that is perhaps diminishing now. The historical Baroque was very largely a church style in Latin America, and of course, it was a church style supported in Colonial times by incredible wealth. Those all-over gilded interiors are, I suspect, rather more sumptuous than their models in Spain and Portugal, since the Colonial cities were closer to the sources from which the gold and silver came. But there seems to have

been very little real linkage between the traditions of secular and domestic architecture. Houses were of a quite different order. The old houses of such cities as Lima and Caracas represent a very quiet Baroque venacular, perhaps because of the earliest settlements having been pre-Baroque. After all, some of these places were already going strong in the sixteenth century and they even had slight traces of Gothic to begin with, then a mixture of Plateresque or Manoeline and Herreran Renaissance. It was late in the seventeenth century before they came generally to accept the Baroque, so it is not the bottom layer of their local traditions. That bottom layer is pre-Baroque by a century or more.

MR. NOEL MOFFETT: Did the lecturer say that cities like Caracas are developing very rapidly?

THE LECTURER: They are developing practically explosively.

MR. MOFFETT: Is there a town plan to control this development?

THE LECTURER: Yes, Caracas is an exception in Latin America in that the city plan really seems to have been put in about six weeks ahead of the buildings! A man named Rotival, a Frenchman who had been some years in the United States, is responsible for the planning of Caracas and it goes forward at a pace as notable as the buildings. The expansion is so great that they have broken quite out of the shell of the relatively small town with which they started. In many other cities they just dump down big twentieth-century buildings on the original tight checkerboard plan with its two main squares. Even in Lima, where there is a new broad avenue, the Avenida Tacna, the name of the area lost to Chile, more of the new buildings go up in the congested part of town, or have so far, than on the broad avenue. It is to be hoped that this will change. They have a great many plans on paper and they have some very good people, both native and foreign, who have worked on their plans. Reidy, for instance, has been the city architect responsible for the plans of Rio; Kurchan is the architect responsible for the planning of Buenos Aires. But they have not implemented their planning very much yet except in Caracas.

MR. D. A. PAVEY: Professor Hitchcock mentioned the use of different colours according to the orientation of the faces of buildings. Could he elaborate on that?

THE LECTURER: No, I cannot elaborate on that particular point. There are several different colour systems used. One system of colouring derives from Neoplasticism. Buildings are predominantly white or off-white, with small touches of primary colours. That system is used, for example, on the Cerro Grande apartment house in Caracas, the one with the 'missing storey'. There is then a kind of pastel colouring more like what might be seen on old buildings in Italy, with fairly pale pinks and pale blues. There is a good deal of that in Brazil and also in Peru. Then there is Mexican colouring which tends to be very violent. One building by an architect I know is completely covered with purple mosaic, with projecting orange mosaic balconies. Such extreme violence in colour is peculiar to Mexico. Then there is a method developing in Caracas which derives from the existing colour traditions, traditions which vary a good deal from country to country. Peru is traditionally not very polychromatic but Venezuela is, and apparently more so in Maracaibo than in Caracas. Of course, the old colours tend to be off-colours, broken somewhat, because they are repainted—I could not tell you how often—and one gets effects that you sometimes get here in England with layers and layers of cream paint on old buildings.

I do not think there is any theory of varying the colours according to orientation. But the strength of the sunlight seems to take the colour out, so that the colours look very different from the way they would in this climate. It is evidently not easy to get deep colours that will not fade.

MR. J. K. BRIGHT: I am a student, and would like to ask if the Professor has any views on the teaching of students in Latin America compared with those in this country?

THE LECTURER: I cannot tell you much about that. It is my impression that the majority of Latin-American schools still give a sort of dilute École des Beaux Arts training. Exceptions to this are the two schools at the Catholic University of Santiago and at the University of Valparaíso, both in Chile, and the school once headed by Vilamajó at Montevideo. The number of architects that come to the States for training is extraordinarily large. Most of them, I think, get some training first at home but they presumably feel their own schools are lacking. Leopold Arnaud, the Dean of the Columbia University School of Architecture, was sent down by the State Department just before I went there to give advice on architectural education. Evidently they feel their education can and should be improved, but I think that the pull of foreign schools will remain strong with Latin Americans for some time still.

One peculiar thing about this Latin-American world is that it has no obvious cultural centre. One country is just as good as another. In actual fact, to an outsider, Brazil tends to make more of an impression than Colombia let us say. But there is no reason why Colombians should go to Brazil or Uruguay to study, they might just as well go to the United States. In the case of Colombians, as far as I can make out, they all do! I was impressed by Larrain who was the only full-time architectural educator I think that I have met. He is the Dean of the Santiago School. I was taken over the School in Buenos Aires and I never saw such a physical shambles in my life. It has not been expanded for the last seventy years and the students said to me: 'You see we only come here because it is the only way we can get our licence; anything we learn we learn from the architects in whose offices we work'. That is the kind of situation that perhaps might improve in the near future.

The Fundación Eva Perón is a straight super-temple; Perón's famous skyscraper, under which he built his hideaway, is a very clumsy piece of concrete; it was never finished by him, and now it probably never will be finished. Yet Perón's Post Office garage is a quite decent contemporary building. He seems to have had no very strong convictions about architecture. But his effect on architecture was bad because of the general discouragement of the upper middle classes, who would normally provide both the architects and their clients.

THE CHAIRMAN: We have had a full and interesting discussion and we all owe a real debt of gratitude to Professor Hitchcock for coming and talking to us as freely and frankly as he has to-day. I know these countries he has talked of. I have been there several times; in fact, I wrote a book about Mexican architecture in 1922 (a long time ago) and have been most impressed. Professor Hitchcock has told us facts that have left a deep impression. The question of students has been raised—it is necessary to go to a local school to get a licence to practise in Latin-American countries, for the authorities will not grant the privilege of practising otherwise. When I was in Mexico City about 18 months ago there was a Canadian architect, a very clever man, who had lived in Mexico for several years, but was not permitted to practise. He understood he would probably have to live there for several years more before he could get a licence to do anything in a private capacity.

Professor Hitchcock has covered a great area and a new subject in a very comprehensive way and in a very short time. We all thank him very much indeed for doing this for us, for it is a new subject to Europe. There are very few people—I doubt if any, in fact, in this room has done so—who have seen a collection of photographs such as he has so kindly displayed before us, and his personal review of the subject has opened a vista that justifies his statement that those in Europe ought to make a point of finding out what is going on in South America as well as knowing what is going on in Europe and the United States. We thank him very much indeed for coming here, we appreciate tremendously the amount of work he has put into this paper and the wonderful way he has answered all the very diverse questions that have been put to him.

A vote of thanks to the Lecturer was carried with acclamation, and the meeting then ended.

GENERAL NOTES

JOSHUA STEELE: ELECTED IN 1756

On 17th March, 1756, Joshua Steele was elected a member of the Society of Arts and he remained so until his death forty years later. Less well known to posterity than his contemporaries, Samuel Johnson, Joshua Reynolds, Benjamin Franklin and James 'Athenian' Stuart, all of whom joined in 1756, he deserves to be remembered both for his public work at home and in Barbados, and for his diligent performance of his duties as a member, committee chairman and vice-president of the Society.

Like other active members of its early years, Steele attended committee meetings of the Society on a wide range of subjects. On 13th March, 1759, he took the chair at a meeting on drawings, and his presence is recorded at meetings on exhibitions, hemp, manures, nutmegs, paper-making, ship-building and the many other topics which came up for the consideration of this all-embracing body. From August, 1760, to June, 1762, he was in constant attendance as chairman of the standing committee of Mechanics, and he sometimes found time to sit on the committee for Polite Arts.¹ There followed a period of over ten years during which he played no part in the Society's work, being fully occupied in writing his 'Essay towards establishing the melody and measure of speech'—an attempt to record the spoken word in musical form, which contains a transcription of Garrick's rendering of the Hamlet soliloquy, 'To be or not to be.'² He published 'this child which I have so long nourished in private'³ in 1775, dedicating it the Society of Arts and the Royal Society.⁴

A year earlier, in 1774, he renewed his subscription which had lapsed since 1767,⁵ and from 1775 onwards his name reappears in the minute books.⁶ He took the chair at Society meetings, arranged for offers of premiums to be distributed on the Continent, and was concerned in the arrangements for Barry's decoration of the Great Room, where his portrait can still be seen.⁷ In 1779 he became a vice-president and in 1780 he sailed for Barbados where, a reputed octogenarian,⁸ he began a new career of public work.

Steele had owned land in Barbados since 1750 and had suffered from the customary 'barefaced plundering' from his agents.⁹ Once arrived in the island he found himself greatly occupied with the management of his estates and was forced to postpone his return to England indefinitely. His letters, preserved in the Society's archives, give a vivid picture of 'this Elysium' as he called the island.¹⁰

'Here, the Field of Enterprise lies in all its original weeds, & in stupid Neglect; And here a Genius, with £2 or 3,000 will do as much, & relatively, much more, than with £30,000 in England: For there, Refinements in luxury, debauch even philosophic Characters, to furnish their Houses and their Tables, & to clothe themselves like Seneca, in Purple:—Here, a few Fools only, make an awkward attempt, contrary to the Nature of the Climate, to live in European Luxury; while the great majority live in white washed Apartments, and in all other things using the unaffected simplicity of Greek Philosophers'.¹¹

The economy of Barbados, however, was at that time extremely precarious.

Steele wrote: 'This Island, on about 106,000 acres of land, carries above 100,000 souls, of which above 70,000 including all sorts sexes and ages, are black or Mulatto Labourers, whose industry is, upon the whole, diligently executed; But being applied for the most part, to a single object for export [sugar]; as often as that single object fails, so often is it probable that three-fourths of the Land and Labour, so employed, are thrown away . . . the free white people, who make up the remainder of the Inhabitants . . . are [mostly] poor, ignorant & slothful. . . . The Climate, notwithstanding the casual Interference of a Hurricane once or twice in a Century, is so delightful & temperate, that when our white people are once accustomed to the sweets of Indolence and Beggary, it requires more art, than ever has yet been

attempted here, to persuade them that shoes, stockings, or any more clothing than a ragged shirt or shift . . . are worth the Labour of working for'.¹²

In order to provide alternative industries for the island as a whole and to find attractive employment for the poor whites, Steele established, in the year after his arrival, 'The Society of Arts, Manufactures and Commerce in Barbados'. It was an exact replica of the parent body, with medals, premiums and five standing committees.¹³ The new Society was popular amongst the planters as long as it confined its attention to such topics as the use of silk grasses, tanning leather and the production of silk. But Steele considered that the real cause of the island's difficulties was the law which permitted negro slaves to be removed from an estate and sold the moment the proprietor fell into debt. Under his guidance the Barbados Society of Arts resolved 'That all plantation Slaves should be inseparably attached by law to the land'.¹⁴ This was regarded as an attack on the principle of unlimited slavery and aroused widespread hostility. Steele could not be prevented from reforming his own estates and in 1789 he turned them into manors, his negroes becoming copyholders bound to their tenements, and owing him rent and personal service which they paid in labour on his demesne lands.¹⁵

His experiments succeeded, and the accounts which he wrote of them to Thomas Clarkson were published in the *Mitigation of Slavery* (1814). In 1790 he became a member of His Majesty's Council for the island and six years later he died,¹⁶ having been as active in working for his fellow men at the close of his life as he had been at its beginning.

'The novelty of everything here, Plants, Vegetation, seasons, slaves, Brutality of my species, the endeavours of our infant Society to open the Eyes of the people of Capacity & Feelings to amend many things that are amiss, And the attention, I give to model the government of my own Estates, so as to add to the happiness of my Slaves, without injury to myself, have so completely amused me, by finding constant occupation for me, . . . in this eternal Summer Country'.¹⁷

D. G. C. A.

1. [Royal] Society of Arts, Minutes of Committees, 1758-60; 1758-60; 1760-61; 1761-62; 1762-63.
2. Joshua Steele, *An Essay towards establishing the melody and measure of speech to be expressed and perpetuated by peculiar symbols*. London, 1775. Boswell expressed the wish that Johnson's speech 'could be preserved as music is written, according to the very ingenious method of Mr. Steele, who has shewn how the recitation of Mr. Garrick, and other eminent speakers, might be transmitted to posterity in score'. James Boswell, *The Life of Samuel Johnson*, (Library of English Classics edition) London, 1900. Vol. II, p. 98.
3. Joshua Steele, *op. cit.*, v. The presentation copy of this work is still preserved in the Society's Library.
4. In 1775 he contributed two papers on musical instruments to the 'Philosophical Transactions'. *Dictionary of National Biography*, LIV, p. 129. The 'Essay towards establishing the measure and melody of speech' also contains a dedicatory epistle addressed to Sir John Pringle, President of the Royal Society (1772-1778).
5. [Royal] Society of Arts, Subscription Books, 1754-63; 1764-72; 1773-92.
6. [Royal] Society of Arts, Minutes, 1775-76; 1778-79; 1779-80.
7. It appears in the fifth picture, 'The Society'. Barry wrote: 'Towards the centre of the picture is seen that distinguished example of female excellence, Mrs. Montague, who appears recommending the ingenuity and industry of a young female, whose work she is producing, near her are placed the late Duchess of Northumberland, Earl Percy, V.P., Joshua Steele Esq., V.P. . . . *Transactions of the Society of Arts*, III, p. 126.
8. The Dictionary of National Biography gives the year of his birth as 1700. This is questioned by J. Newman in his article, 'The Enigma of Joshua Steele', *Journal of the Barbados Museum and Historical Society*, XIX, No. 1, but in a letter dated 1786, Steele suggests that a man of 85, 'sinking under the Fogs & Atmosphere of England' would be restored by the climate of Barbados to 'the Comforts and Vigour of 50'. Royal Society of Arts, Loose Archives, A 13/29.
9. Royal Society of Arts, Loose Archives, loc. cit.
10. *ibid.*
11. *ibid.*, A 10/26.
12. *ibid.*, A 11/45.
13. On July 14th, 1781, Steele addressed the following letter to the Society: 'My Lords & Gentlemen, I have the honour to inform you, that several Gentlemen of property & liberal Education, in this Island, following your laudable Example, have formed themselves into a Society, "For the purposes of discovering the useful qualities of the native productions, animal, vegetable and Fossil, of Barbados; To consider of, & to devise the means of encouraging such useful arts as may excite industry in the lower Classes of the white & free Inhabitants; and in general to deliberate on, & to promote, as far as they can, whatever, in their opinion, will contribute to the advancement of the Arts, Manufactures & Commerce, of this Island. To form Rules & Orders for their Proceedings, & to keep exact & instructive Minutes of their Resolutions & Transactions". *ibid.*, A 11/45. This letter received formal acknowledgment on 1st, January 1782 when a letter was sent to Steele in the name of the London Society informing him that 'the Society established at Barbados is elected in its aggregate capacity a member of this Society'.
14. *ibid.*, A 13/29.
15. *Dictionary of National Biography*, loc. cit.
16. *Journal of the Barbados Museum and Historical Society*, XXII, 2. Steele's letters from Barbados are printed in this volume.
17. Royal Society of Arts, Loose Archives, A 12/34.

DANISH EXHIBITION

The Danish Museum of Decorative Art (Kunstindustrimuseet), Copenhagen, is at present holding an Exhibition demonstrative of the work of the late Kaare Klint, Hon.R.D.I. The Exhibition, which will remain open until 2nd April, is composed mainly of furniture, with some drawings, paintings and textiles.

ENGINEERS' SCHOLARSHIPS

Scholarships and prizes are offered by the Junior Institution of Engineers and the Maudslay Society to young engineers, to assist them in their technical education and practical training. The value of a Maudslay Scholarship will not exceed £400, and of a Prize £50. Candidates must be under 28 years of age on 31st March, 1956, which is the closing date for applications, and have attained the same standard of education or engineering training as is required for membership of the Institution in the appropriate grade. Full particulars are obtainable from the Secretary, Junior Institution of Engineers, Pepys House, 14 Rochester Row, Westminster, S.W.1.

BRITISH STANDARD OF COLOUR

The work of the Colour Ranges Committee set up by the paint industry in 1952 has resulted in the publication of a new British Standard—B.S. 2660—which includes a range of 101 standard colours. These have been arrived at after consultation with various interested bodies, including the Royal Institute of British Architects and the British Colour Council. Copies of the new standard are obtainable from the British Standards Institution, 2 Park Street, W.1, at the cost of 7s. 6d.

OBITUARY

MR. A. V. SUGDEN

We record with regret the death, in Cheshire recently at the age of 78, of Mr. A. V. Sugden.

Alan Victor Sugden, J.P., had for many years been chairman of Wallpaper Manufacturers, Ltd., and was a Liveryman of the Worshipful Company of Stationers and Newspaper Makers. As representative of Wallpaper Manufacturers, Ltd., he served on the Textile Section Committee of the Society's 1933 Competition of Industrial Designs. He also took part on several occasions in discussions at meetings at the Society's House. Among his publications were a *History of English Wallpaper*, which he wrote in collaboration with Mr. J. L. Edmondson, and *The Crace Papers*, in collaboration with Mr. E. A. Entwisle.

He was elected a Life Fellow of the Society in 1932.

NOTES ON BOOKS

ROMAN POTTERY. *By R. J. Charleston. Faber, 1955. 35s.*

Mr. Charleston's book on Roman pottery combines an excellent summary of relevant available knowledge with an assessment of æsthetic values. For many years Roman pottery was treated in a dry-as-dust manner, and examples of it were displayed (if displayed is the right word) in our museums uninvitingly, merely as an adjunct to Roman history and archæology. While it was used as an instrument for determining chronology it was rarely regarded as art. Mr. Charleston looks at Roman pottery as he might look at a mediæval pitcher from Cheam or a Tzu Chou jar from China—for its artistic qualities alone. Rightly, in a book devoted to considerations of style and connoisseurship 'chronology has been subordinated to æsthetic considerations'.

Roman Pottery comprises a brief but well-packed commentary of 39 pages, a table of profiles and shapes of Arretine and Gaulish red-gloss pottery, a brief (even this runs to four pages) but carefully selected bibliography, an index, and one hundred plates, four of which are in full colour. The illustrations reveal effectively the

'catholicity of Rome', and make visually clear the author's points concerning form, decoration, and technique.

In introducing his subject Mr. Charleston notes the variety of cultures comprised within the vast and changing structure which we know as the Roman Empire, and the corresponding diversity of ceramic expression within it. There is not only an interplay of stylistic influences between 'marginal territories of the Empire' and its heart, there is further a give-and-take—a reciprocal play of techniques. As an example Mr. Charleston points out how Egypt and the Near East opened up colour potentialities which had hitherto been ignored or unimagined by potters of the Greco-Roman world.

Roman pottery is treated under three simple headings, (1) red-gloss, (2) glazed, and (3) 'coarse' pottery, which cover roughly the central pottery tradition, the ceramic cultures of the periphery, and the provincial types sustained by local tradition.

Red-gloss pottery, Mr. Charleston says, 'was not only the most widely dispersed single type of ware in the Roman world, but was virtually peculiar to it'. In its most developed form, in the consummate relief-figured Arretine ware it was admired, and later prized by connoisseurs of the Renaissance world as though it was a gift from heaven. The Romans themselves, if they did not rank it as highly as silver and bronze, thought sufficiently well of it to preserve it carefully. More than one riveted specimen is known.

Characteristic of Mr. Charleston's book is the way he describes processes and techniques, thus enabling us to trace how form or decorative treatment have arisen out of material or process, or the extent to which it has been influenced by some other craft, such as that of the silversmith or the glass worker. Particularly fascinating is his description of the method by which the Roman potters achieved the mysterious gloss which long baffled students of the craft.

The wares classified under various groupings, such as 'Pergamene', 'Samian', or 'Arretine' are carefully described, but Mr. Charleston does not hesitate to point out the tentative nature of such groupings, and the possibility that with fuller knowledge they may 'prove to be less homogeneous and exclusive than at first appeared'.

Those who are interested in the arts as expressions of national temper may see in the more severe, clean-lined shapes, which incidentally Mr. Charleston considers the artistically outstanding achievement in the red-gloss class, something of that severely practical genius which created the great roads and bridges and other triumphs of Roman engineering skill.

If red-gloss pottery is the typical and best-known Roman ceramic product, the glazed and 'coarse' wares are those which will probably most excite the ceramic student. The glazed wares fall into three groups, the copper-stained lead-glazed wares of Asia Minor, the 'glazed quartz frit ware' of the Roman-Egyptian potters, and the Alkaline-glazed pottery of Parthia. The colour properties of the 'glazed quartz frit' pottery (Mr. Charleston prefers this more accurate description to the word *faience* which is commonly used) is finely conveyed, as well as something of the texture of the glaze by the colour plate of the first-century blue amphora from Egypt. How drab this sensuous 'singing' turquoise pot makes some of our modern studio pottery look.

Greater variability in quality and diversity of form and technique are displayed by the 'coarse' wares of provincial origin, but these demonstrate the author's contention that 'excellence of form in pottery' (and he might have added, 'of decoration', as well) 'is not the sole prerogative of any one race of potters'. Whilst some of these wares are vital and eloquent of the potter's skill, others (for example Plate 75) are curiously dumb. The slip-decorated Castor ware will appeal to those who remember the slipware tradition of the Staffordshire potters.

It is impossible to do justice in a brief notice to all the points raised by this book. Mr. Charleston has sorted out the threads of Roman ceramic history to produce a handsome and scholarly book.

REGINALD G. HAGGAR

DECORATIVE MAPS. *By Heather Child. Studio, 1956. 25s*

Miss Heather Child's admirable book is the latest in the Studio's 'How to do it' series, a succinct if somewhat equivocal title. No book, of course, and indeed no library can turn someone into an artist who lacks the seed which can only be brought to flower by constant practice; and this series can be valuable only in offering useful ideas and technical advice to those already blessed with an innate faculty for a fine or applied art, even if that faculty be hardly suspected and wholly untrained.

Prerequisites for success in inspiring such readers are, clearly, enthusiasm and personal experience, and these Miss Child brings to her clear, well-balanced account of the special problems and attributes of decorative maps, which may be used as interior decorations as well as in posters, books, and reports of all kinds. In an age of greatly extended travel there are, as she points out, increasing opportunities for designers to take over from the cartographer, and produce imaginative as well as instructive decorations—such, for example, as the twin hemisphere adorned with fanciful images by Lucien Boucher for Air France. A particular problem of the bird's-eye plans, as she might have observed, is the degree of licence an artist may allow himself in enlarging, placing, and labelling prominent buildings, such as St. Paul's, which a foreigner, poring over Mr. Kerry Lee's charming decoration of *London Town*, might never guess was separated from Ludgate Circus by an appreciable hill. Anyhow, the diversion may well outweigh the distortion of posters so beguiling.

It only remains to be said that this most attractive and informative book is produced with all the care one expects of the Studio, and illustrated with a great variety of maps, old and new.

NEVILLE WALLIS

SHORT NOTES ON OTHER BOOKS

NEW ESSAYS ON ART. *By Frederick Taubes. New York, Watson-Guption Publications 1955. \$2.95.*

These essays, which appeared in *American Artist* between 1950 and 1954, express the author's opinions on contemporary art. The book contains also many black and white illustrations by Mr. Taubes.

FURNITURE IN ROMAN BRITAIN. *By Joan Liversidge. Tiranti, 1955. 10s 6d*

Research into the furnishings of homes in Roman Britain is based on a variety of sources. The fragments of actual furniture which have survived are few, but pictorial evidence can be obtained from Romano-British sculpture, and among other sources is the comparative material in other parts of the former Roman Empire. Professor J. M. C. Toynbee has written the forward to the book, which contains ninety photographic illustrations.

FROM THE JOURNAL OF 1856

VOLUME IV. 14th March, 1856

MR. JOHN RUSKIN'S VIEWS ON INDUSTRIAL DESIGN

From the report of the remarks made by Mr. John Ruskin in the discussion following a paper on 'Recent Progress in Design, as Applied to Manufactures', by George Wallis, Head Master of the Government School of Art, Birmingham.

Mr. Ruskin fully accepted two of Mr. Wallis's principles, namely that the material and the use of the object to be produced should be first consulted; he heartily wished that those two rules were accepted by all, and steadily adhered to, and that, in one branch of art especially—now coming daily more and more into practice—painting on glass, it were always remembered by the workman that the use of a window was to let in light; that the virtue of the glass in a window was to be transparent; and that

all art which tried to represent it as opaque—as a picture, instead of a window, was mistaken and absurd. But accepting fully these two laws laid down by Mr. Wallis, and holding always that no art-production was right, unless first of all serviceable for its proper purpose, he pleaded beyond this, for the direction of the mind of the workman straight to nature, whenever he had to introduce ornament at all. All the true nobleness of art had come from people loving nature in some way or the other, expressing their sentiments about nature; and exactly in proportion as the reference to nature became more direct, the art became nobler. So, then, art was to be encouraged—not by multiplying productions of past times, but by educating the workmen of our own—and after having filled their minds with knowledge of natural objects, leaving them free to invent continually new forms of objects, and new applications of their knowledge. And by thus proceeding we should elevate our workmen, and make them happy; and the ends of commerce would, at least, be answered far more effectually by producing thoroughly new articles than by multiplying forms of old ones.

Some Activities of Other Societies and Organizations

MEETINGS

- MON. 19 MAR. Geographical Society, Royal, South Kensington, S.W.7. 8.30 p.m. Prof. O. H. K. Spate: *Problems of Development in New Guinea.*
- TUES. 20 MAR. British Architects, Royal Institute of, 66 Portland Place, W.1. 6 p.m. Edward D. Mills: *The External Cladding of Buildings.*
- Manchester Geographical Society, 16 St. Mary's Parsonage, Manchester, 3. 6.30 p.m. Prof. P. W. Bryan: *Yorkshire—Moors, Wolds and Coasts.*
- Mechanical Engineer, Institution of, 1 Birdcage Walk, S.W.1. 6.45 p.m. *The Use of Pictures and Other Graphical Methods in Teaching Engineering (Discussion).*
- Textile Institute, at 10 Blackfriars Street, Manchester, 3. 7 p.m. M. M. Taylor: *The Inspection of Rayon Fabric—variations in judgment due to variations in light.*
- WED. 21 MAR. British Foundrymen, Institute of, at the Waldorf Hotel, W.C.2. 7.30 p.m. J. F. B. Jackson: *Theory and Practice in Steel Castings Production.*
- Electrical Engineers, Institution of, Savoy Place, W.C.2. 5.30 p.m. G. F. Kennedy: *American Power Station Practice.*
- Fuel, Institute of, at the Institution of Civil Engineers, Great George Street, S.W.1. 5.30 p.m. (1) P. J. Jackson and J. M. Ward: *Operational Studies of the Relationship between Coal Constituents and Boiler Fouling* (2) A. M. Freedman: *Full-scale Trials of the Humidification of Combustion Air to Prevent Boiler Fouling* (3) B. Lees: *An Investigation into the Air-heater Corrosion of Oil-fired Boilers.*
- Meteorological Society, Royal, 49 Cromwell Road, S.W.7. 5 p.m. Prof. P. A. Sheppard: *The Anegada Expedition.*
- Radio Engineers, British Institution of, at Cardiff Technical College, Cathays Park, Cardiff. 6.30 p.m. J. L. Russell: *Electronic Servomechanisms.*
- Victoria & Albert Museum, South Kensington, S.W.7. 6.15 p.m. Angus Acworth: *Palladian Villas in North Italy.*
- THURS. 22 MAR. Anthropological Institute, Royal, at the Royal Society, Burlington House, Piccadilly, W.1. 5.30 p.m. Prof. R. Redfield: *Societies and Cultures as Natural Systems.*
- Refrigeration, Institute of, at the Institution of Mechanical Engineers, 1 Birdcage Walk, S.W.1. 5.30 p.m. R. F. Brown: *Thermodynamic Calculations for Programme Control of a Test Chamber.*
- FRI. 23 MAR. Photographic Society, Royal, 16 Princes Gate, S.W.7. 7 p.m. G. Goodall: *The Use of correcting filters with Kodachrome.*
- TUES. 27 MAR. Chadwick Trust, at the Royal Society of Health, 90 Buckingham Palace Road, S.W.1. 5.30 p.m. B. A. Southgate: *A survey of progress in the control of steam pollution.*

Electrical Engineers, Institution of, Savoy Place, W.C.2. 5.30 p.m. E. Franklin and J. B. James: *Radiation Monitors Using Transistors and other associated papers.*

International Affairs, Royal Institute of, 10 St. James's Square, S.W.1. 1.30 p.m. J. A. Jukes: *Nuclear Energy: a survey of Britain's position.*

Manchester Geographical Society, 16 St. Mary's Parsonage, Manchester, 3. 6.30 p.m. J. Gareth Thomas: *Population and Language in Wales.*

WED. 28 MAR. Central Asian Society, Royal, at the Royal Society, Burlington House, Piccadilly, W.1. 1.30 p.m. Lt.-Colonel Kenneth Mason: *Great Figures of 19th Century Himalayan Exploration.*

Locomotive Engineers, Institution of, at the Institution of Electrical Engineers, Savoy Place, W.C.2. 6 p.m. O. S. Nock: *Railway Signalling from the Driver's viewpoint.*

OTHER ACTIVITIES

MON. 19 MAR. UNTIL 25 MAR. Imperial Institute, South Kensington, S.W.7. 12.30 p.m., 1.15 p.m. and 3 p.m. Weekdays, 3 p.m. and 4 p.m. Saturdays, 3 p.m., 4 p.m. and 5 p.m. Sundays. Films: *Rhodesia Spotlight; Challenge of Progress—Gold Coast; Lord Siva Danced—India.*

TUES. 20 MAR. UNTIL THURS. 22 MAR. Oil & Colour Chemists' Association, at the Royal Horticultural Society's New Hall, S.W.1. Eighth Technical Exhibition, 1956.

WED. 21 MAR. The Building Centre, 26 Store Street, W.C.1. 12.45 p.m. Film Show: *Prestressed Concrete over Tampa Bay; Leyton Marshes Culvert.*

NOW UNTIL 24 MAR. British Architects, Royal Institute of, 66 Portland Place, W.1. *Architecture in Australia: an exhibition of photographs prepared by the Government of the Commonwealth of Australia and the Royal Australian Institute of Architects.*

NOW UNTIL 25 MAR. Imperial Institute, South Kensington, S.W.7. Exhibition: *Nigeria Welcomes the Queen.*

MON. 26 MAR. UNTIL SUN. 1 APR. (Closed Good Friday) Imperial Institute, South Kensington, S.W.7. 12.30 p.m., 1.15 p.m. and 3 p.m. Weekdays, 3 p.m. and 4 p.m. Saturdays, 3 p.m., 4 p.m. and 5 p.m. Sundays. Films: *Traditional Dances of Sukumaland—Tanganyika; Australian Diary; Rhodesia Spotlight; Fighting Fish—New Zealand; Beautiful British Columbia—Canada.*

NOW UNTIL 7 APR. Contemporary Arts, Institute of, 17-18 Dover Street, W.1. Memorial Exhibition: *Willis Baumeister.*